

# LOCAL CLIMATOLOGICAL DATA

## Monthly Summary

### October 2018

Station: Westford  
 Latitude: 44° 37' 38" N Longitude: 73° 02' 29" W Elevation (Ground): 850 feet Time Zone: Eastern

Date	Temperature					Humidity Mean	Deg. Days		Precip Ty 1 fog 2 hvy fog 3 thunder 4 ice plt 5 hail 6 glaze 7 duststm 8 smk, hz 9 blw snw	Snow Cvr	Precip		Pressure Adj. to Sea Level			Wind						Solar Radiation	
	Maximum	Minimum	Average	Mean	Dew Point		Heating Base 65°F	Cooling Base 65°F			Water Equivalent	Ice Pellets Snow	Maximum	Minimum	Mean	Avg Speed	Res Speed	Res Dir	Peak		2 Minute		
																			Speed	Dir	Speed		Dir
1	2	3	4A	4B	5	6	7	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	52.0	44.7	48.4	47.0	45	93	16	0	.....	0	0.34	0.0	30.35	30.23	30.306	0.0	0.0	38	6	NNE	3	42	46
2	53.3	46.0	49.6	49.7	49	96	15	0	.....	0	1.60	0.0	30.29	29.92	30.074	0.1	0.1	128	10	SSW	4	32	18
3	52.3	47.6	49.9	50.1	49	97	15	0	.....	0	0.44	0.0	30.09	29.92	30.019	0.1	0.1	287	9	SW	4	304	43
4	68.4	44.5	56.5	58.0	55	91	8	0	.....	0	0.14	0.0	30.09	29.74	29.873	2.7	2.6	213	24	WSW	11	215	50
5	53.9	32.3	43.1	42.9	36	79	22	0	.....	0	0.00	0.0	30.27	30.09	30.194	0.2	0.1	339	13	NNE	5	294	150
6	62.2	35.8	49.0	51.1	48	89	16	0	.....	0	0.16	0.0	30.19	29.99	30.085	1.7	1.7	213	29	SSW	11	220	68
7	60.0	43.9	52.0	48.9	47	95	13	0	.....	0	0.26	0.0	30.38	30.00	30.204	0.2	0.1	258	14	S	7	214	34
8	58.5	44.0	51.3	50.0	48	94	13	0	.....	0	0.00	0.0	30.43	30.22	30.343	1.6	1.6	212	30	SW	13	214	38
9	76.9	58.5	67.7*	67.3	63	87	0	3	.....	0	T	0.0	30.22	30.01	30.112	4.1	4.1	214	26	SW	12	206	109
10	79.6*	52.4	66.0	67.5	63	86	0	1	.....	0	0.00	0.0	30.01	29.78	29.907	1.4	1.4	216	19	WSW	9	226	115
11	68.1	52.2	60.1	63.5	62	96	5	0	.....	0	1.22	0.0	29.78	29.45	29.570	1.9	1.8	220	20	SSW	10	212	17
12	59.4	41.6	50.5	48.3	41	78	14	0	.....	0	0.00	0.0	29.67	29.51	29.587	1.5	1.4	299	22	WNW	12	301	78
13	47.6	33.3	40.4	40.9	36	83	24	0	.....	0	0.06	0.0	29.98	29.65	29.787	0.3	0.3	287	18	WNW	6	295	61
14	55.2	33.1	44.1	42.3	36	79	21	0	.....	0	0.00	0.0	30.14	29.98	30.097	0.5	0.5	267	16	NW	8	286	123
15	55.0	38.1	46.5	46.3	43	90	18	0	.....	0	0.17	0.0	30.12	29.61	29.871	2.8	2.6	227	29	W	13	240	20
16	48.5	37.7	43.1	41.9	33	70	21	0	.....	0	0.00	0.0	30.00	29.76	29.911	3.2	3.1	278	32	WNW	19	277	95
17	46.8	33.8	40.3	41.0	34	77	24	0	.....	0	0.20	0.0	29.94	29.69	29.783	3.5	2.5	268	26	WNW	13	295	44
18	40.7	28.5	34.6	33.4	23	65	30	0	.....	0	0.00	0.0	30.24	29.93	30.157	4.4	4.3	301	31	NW	19	300	89
19	58.0	33.5	45.8	45.7	36	68	19	0	.....	0	0.00	0.0	30.18	29.61	29.936	4.3	4.2	216	28	S	13	205	121
20	58.6	40.6	49.6	50.7	37	60	15	0	.....	0	0.00	0.0	29.63	29.43	29.503	3.9	3.5	238	25	SW	15	301	112
21	40.6	31.4	36.0	34.1	26	71	29	0	.....	0	T	T	30.04	29.60	29.850	3.6	3.6	307	24	W	14	307	31
22	40.8	30.5	35.6	35.3	26	70	29	0	.....	0	0.01	0.0	30.12	30.03	30.084	0.5	0.4	271	16	NW	7	315	65
23	49.1	31.4	40.2	38.5	36	91	25	0	.....	0	0.22	0.0	30.09	29.92	29.992	0.1	0.1	104	14	SW	6	208	48
24	38.4	29.7	34.1	33.6	33	96	31	0	.....	T	0.13	T	30.09	29.92	30.027	0.3	0.3	320	14	N	6	306	6
25	35.5	29.2	32.4	31.3	27	83	32	0	.....	0	0.04	T	30.08	30.02	30.052	2.8	2.8	313	20	WNW	11	303	24
26	40.7	25.0*	32.9	30.5	21	68	32	0	.....	0	0.04	0.0	30.13	30.03	30.086	0.5	0.5	300	15	W	8	284	112
27	39.2	28.0	33.6	34.0	28	80	31	0	.....	0	0.36	T	30.13	29.73	29.992	0.6	0.6	33	19	N	7	43	25
28	41.8	35.1	38.4	38.6	37	95	26	0	.....	0	0.12	0.0	29.73	29.63	29.662	0.7	0.7	217	11	SSW	7	211	30
29	46.7	35.8	41.3	41.6	40	93	23	0	.....	0	0.19	0.0	29.80	29.63	29.680	0.9	0.8	251	18	NW	8	279	40
30	37.0	26.0	31.5*	33.7	31	88	33	0	.....	0	0.00	0.0	30.08	29.80	29.960	1.1	1.1	297	20	WNW	10	292	30
31	49.5	25.6	37.6	37.0	34	90	27	0	.....	0	0.15	0.0	30.09	29.76	29.914	1.7	1.6	210	18	SSW	9	200	14
Sum	Sum	-----	-----	---	----	Ttl	Ttl			Total	Total	For the month:										---	
1614	1150					627	4	Number of Days		5.85	T	30.43	29.43	29.955	1.7	1.2	253	32	WNW	19	300		
Avg	Avg	Avg	Mean	Avg	Avg	----	----	Precip		Season Ttl		Date	Date	-----	----	----	---	Date	Date	Avg			
52.1	37.1	44.6	44.3	39	83.8	----	----	≥.01 inch	19	33.69	T	8	20	-----	----	----	---	16	18	60			
Number of Days						Season to Date	Snow, Ice ≥1.0 inch	0	Greatest in 24 Hours and Dates						Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date								
Max Temperature			Min Temperature			816	209	Thunder	0	Precipitation			Snow, Ice Plts										
≥ 90°F	≤ 32°F	≤ 32°F	≤ 0°F	----	----	Heavy Fog	0	1.90	2- 3	T	21+	T					24						
0	0	11	0	----	----	Clear	2	Partly Cloudy			7	Cloudy			20								

NOTES:  
 Units: Temperature=°F, Wind=mph, Pressure=Inches Hg, Precipitation=inches.  
 Data in column 4A are (MAX+MIN) ÷ 2, whereas columns 4B, 5, 6, 15, 16, 23 are means via continuous observations for 24 hours.  
 Column 5: Dew point is calculated from temperature and humidity and is continuously averaged for 24 hours.  
 Data in columns 9, 10, 12 are entered manually by the station observer.  
 Columns 17-18: Resultant wind is calculated by the vector sum of continuous wind observations.  
 Column 23: Solar Radiation is measured in W/m<sup>2</sup> and is continuously averaged for 24 hours.  
 Data in columns 4B, 5, 6, 15, 16, 23 are updated continuously, there by achieving a "true" mean.

OBSERVATIONS AT 3-HOUR INTERVALS

October 2018: Westford

Table with columns for Hour, Sunshine, Pressure, Rainfall rate, Temperature, Dew Point, Humidity, and Wind (Direction, Speed, Gust) for each day from OCT 01 to OCT 18.

MAXIMUM SHORT DURATION PRECIPITATION

Table showing precipitation amounts for various time periods (5, 10, 15, 20, 30, 45, 60, 80, 100, 120, 150, 180 minutes) and ending dates/times.

The precipitation amounts may occur at any time during the month. The time indicated is the ending time of the interval. Date and time are not entered for trace amounts.

# OBSERVATIONS AT 3-HOUR INTERVALS

## October 2018: Westford

Hour	OCT 19									OCT 20									OCT 21								
	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Direction	Speed	Gust	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Direction	Speed	Gust	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Direction	Speed	Gust
00	0	30.18	0.00	36	28	72	24	2	9	0	29.63	0.00	51	38	61	22	7	18	0	29.60	0.00	41	32	72	33	0	0
03	0	30.12	0.00	35	28	76	21	3	9	0	29.53	0.00	50	36	58	21	3	15	0	29.66	0.00	36	31	80	30	0	4
06	0	30.08	0.00	36	30	79	22	5	12	0	29.45	0.00	49	39	68	20	5	21	0	29.73	0.00	34	27	76	29	1	13
09	35	30.04	0.00	37	32	82	20	7	18	30	29.46	0.00	50	41	73	20	5	14	28	29.82	0.00	33	25	71	33	2	18
12	485	29.96	0.00	50	39	65	21	8	20	643	29.47	0.00	57	38	48	25	9	23	79	29.88	0.00	33	25	71	28	11	20
15	306	29.86	0.00	57	42	56	21	7	18	334	29.47	0.00	58	35	42	25	3	21	109	29.91	0.00	34	23	64	29	4	22
18	0	29.81	0.00	53	41	64	20	4	15	0	29.49	0.00	51	32	49	28	1	5	0	29.96	0.00	33	25	71	28	1	12
21	0	29.71	0.00	53	41	64	21	1	11	0	29.55	0.00	44	35	71	01	0	0	0	30.01	0.00	33	22	65	31	5	13
OCT 22									OCT 23									OCT 24									
00	0	30.03	0.00	33	22	64	30	5	15	0	30.08	0.00	38	35	90	21	0	0	0	29.92	0.00	38	37	96	01	0	0
03	0	30.06	0.00	31	22	67	31	0	5	0	30.07	0.00	36	34	93	22	0	0	0	29.92	0.00	37	36	96	33	2	7
06	0	30.08	0.00	31	21	65	30	1	5	0	30.05	0.00	35	34	94	22	0	0	0	29.95	0.00	35	34	96	01	1	9
09	123	30.10	0.00	33	23	66	27	0	0	40	30.03	0.00	35	34	95	06	0	3	9	30.03	0.00	32	31	96	33	0	5
12	236	30.11	0.00	38	25	60	28	5	10	148	29.99	0.00	48	38	70	05	0	0	9	30.08	0.00	32	31	96	34	0	0
15	276	30.08	0.00	40	28	61	19	1	7	25	29.94	0.27	40	38	92	08	0	4	11	30.09	0.00	33	32	97	34	0	0
18	0	30.07	0.00	38	30	74	19	0	0	0	29.92	0.00	39	37	94	04	0	0	0	30.08	0.00	34	33	97	32	0	0
21	0	30.09	0.00	37	33	84	21	0	0	0	29.92	0.00	39	37	95	05	0	0	0	30.08	0.00	30	29	96	02	0	0
OCT 25									OCT 26									OCT 27									
00	0	30.08	0.00	35	34	96	30	5	13	0	30.05	0.00	29	22	74	34	1	6	0	30.11	0.00	28	21	75	03	0	0
03	0	30.06	0.00	32	31	95	33	1	9	0	30.04	0.00	29	21	70	28	3	9	0	30.11	0.00	29	23	76	07	0	0
06	0	30.05	0.00	32	30	93	32	1	8	0	30.06	0.00	27	21	78	29	1	8	0	30.10	0.00	31	22	69	10	0	0
09	54	30.07	0.00	32	29	89	33	0	8	25	30.10	0.00	26	22	84	05	0	6	105	30.08	0.00	38	26	61	05	1	6
12	86	30.05	0.00	31	26	81	31	4	15	390	30.12	0.00	35	22	59	33	0	7	102	30.06	0.00	39	27	62	04	0	4
15	39	30.02	0.00	31	25	80	31	2	18	260	30.09	0.00	39	17	42	28	1	6	18	29.95	0.00	34	31	90	05	0	9
18	0	30.03	0.00	30	23	75	29	4	13	0	30.09	0.00	31	21	66	04	0	0	0	29.89	0.00	35	33	94	03	4	10
21	0	30.05	0.00	30	22	74	06	0	10	0	30.12	0.00	25	21	85	04	0	0	0	29.80	0.05	36	34	94	00	1	13
OCT 28									OCT 29									OCT 30									
00	0	29.73	0.00	36	34	94	04	1	11	0	29.66	0.00	40	38	94	18	0	4	0	29.80	0.00	36	35	95	33	0	6
03	0	29.66	0.00	36	34	95	01	0	0	0	29.64	0.00	41	39	92	19	0	8	0	29.84	0.00	35	33	93	30	0	0
06	0	29.66	0.07	36	35	96	01	0	0	0	29.64	0.00	41	40	94	21	0	7	0	29.88	0.00	33	31	93	29	0	0
09	54	29.66	0.00	38	37	96	05	0	1	72	29.65	0.00	43	41	96	21	3	6	21	29.94	0.00	34	31	91	31	0	6
12	81	29.65	0.00	39	38	96	21	4	10	179	29.65	0.00	46	43	89	22	0	0	69	29.98	0.00	35	30	80	28	6	13
15	104	29.63	0.00	41	40	96	22	0	9	72	29.66	0.00	44	42	92	25	1	7	58	30.00	0.00	36	31	80	29	2	8
18	0	29.66	0.00	41	40	95	20	0	0	0	29.71	0.00	41	39	93	29	0	6	0	30.04	0.00	35	31	85	28	0	0
21	0	29.68	0.00	40	39	95	19	1	7	0	29.77	0.00	38	37	94	31	0	0	0	30.08	0.00	30	27	91	29	0	0
OCT 31																											
00	0	30.06	0.00	26	25	94	29	0	0																		
03	0	30.09	0.00	29	28	95	19	0	7																		
06	0	30.06	0.00	31	29	92	21	5	9																		
09	46	30.02	0.00	33	31	92	22	0	0																		
12	54	29.91	0.00	36	33	91	19	1	8																		
15	32	29.78	0.00	40	36	86	20	5	14																		
18	0	29.78	0.00	43	41	82	19	4	10																		
21	0	29.77	0.00	48	44	88	20	1	9																		

### WEATHER NOTES

NOTES:  
 Units: Temperature=°F, Wind=mph, Pressure=Inches Hg, Precipitation=inches.  
 Wind Direction: Directions are those from which the wind is blowing, indicated in tens of degrees from true north: i.e., 09 for East, 18 for South, 27 for West, and 00 or 36 for North.  
 Wind Speed: The observed one-minute average speed in miles-per-hour.  
 Wind Gust: The maximum instantaneous wind speed for the 10-minute period preceding the observation.  
 Rainfall Rate: The instantaneous rainfall rate at the time of observation, calculated by timing consecutive 0.01" pulses from the electronic rain gauge and interpolating this rate for one hour.

### SUMMARY BY HOUR

Hour	Averages						Resultant Wind	
	Sunshine	Pressure	Temperature	Dew Point	Humidity	Wind Speed	Direction	Speed
00	0	29.963	43	39	86	1.4	25	1.1
03	0	29.962	42	38	87	1.6	26	1.2
06	0	29.964	41	38	88	1.6	24	1.2
09	69	29.984	43	39	87	1.7	26	1.0
12	235	29.968	47	40	79	2.4	27	2.0
15	144	29.931	48	41	77	2.0	25	1.6
18	4	29.932	47	41	81	1.3	23	0.9
21	0	29.946	44	40	86	1.1	24	0.7

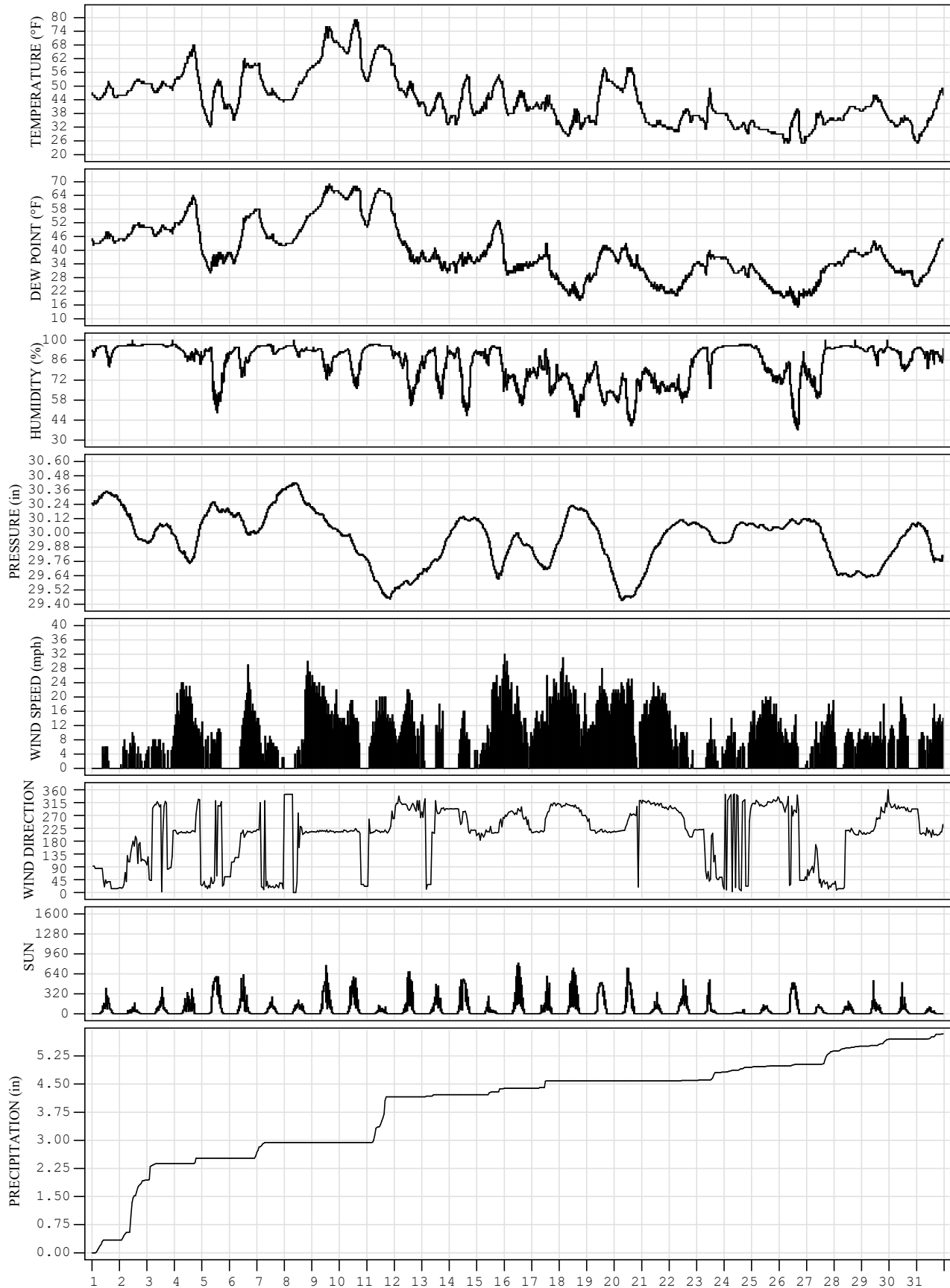
## HOURLY PRECIPITATION (Water Equivalent) October 2018: Westford

Date	A.M. Hour Ending at												P.M. Hour Ending at												Date
	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
01				0.02	0.06	0.04	0.06	0.04	0.08	0.04														01	
02			0.06	0.06	0.04	0.04			0.01	0.43	0.36	0.12	0.06		0.11	0.11	0.05	0.03	0.03	0.07		0.01	0.01	02	
03		0.01	0.35	0.02	0.02	0.01	0.02	0.01										0.03	0.11					03	
04																								04	
05																								05	
06																								06	
07	0.06	0.08	0.01	0.02	0.05	0.02	0.02															0.06	0.10	07	
08																								08	
09																								09	
10																								10	
11					0.01	0.05	0.14	0.18	0.03	0.01		0.06	0.09	0.09	0.10	0.36	0.10							11	
12																								12	
13				0.02						0.03	0.01													13	
14																								14	
15										0.05	0.01	0.01	0.01						0.08	0.01			0.01	15	
16																								16	
17							0.02				0.17	0.01												17	
18																								18	
19																								19	
20																								20	
21																								21	
22										0.01														22	
23		0.01											0.02	0.04	0.08	0.06						0.01		23	
24		0.01		0.01	0.01		0.02						0.01	0.02	0.01		0.02	0.02						24	
25	0.01	0.01											0.01	0.01	0.01	0.01								25	
26										0.01	0.01	0.01	0.01	0.01	0.01	0.10	0.08	0.05	0.03	0.02	0.04		0.01	26	
27														0.01	0.01	0.10	0.08	0.01	0.01	0.02	0.04		0.01	27	
28				0.01	0.03	0.01	0.01			0.01	0.01				0.01	0.01	0.08	0.01	0.01	0.02	0.04	0.01	0.01	28	
29						0.01	0.01								0.03	0.01	0.01		0.02	0.04	0.02	0.03		29	
30																								30	
31										0.01		0.02	0.03			0.03	0.04					0.01		0.01	31
Sum	0.07	0.12	0.42	0.15	0.20	0.19	0.30	0.25	0.12	0.53	0.45	0.39	0.25	0.17	0.35	0.68	0.30	0.14	0.20	0.21	0.07	0.07	0.08	0.14	Sum

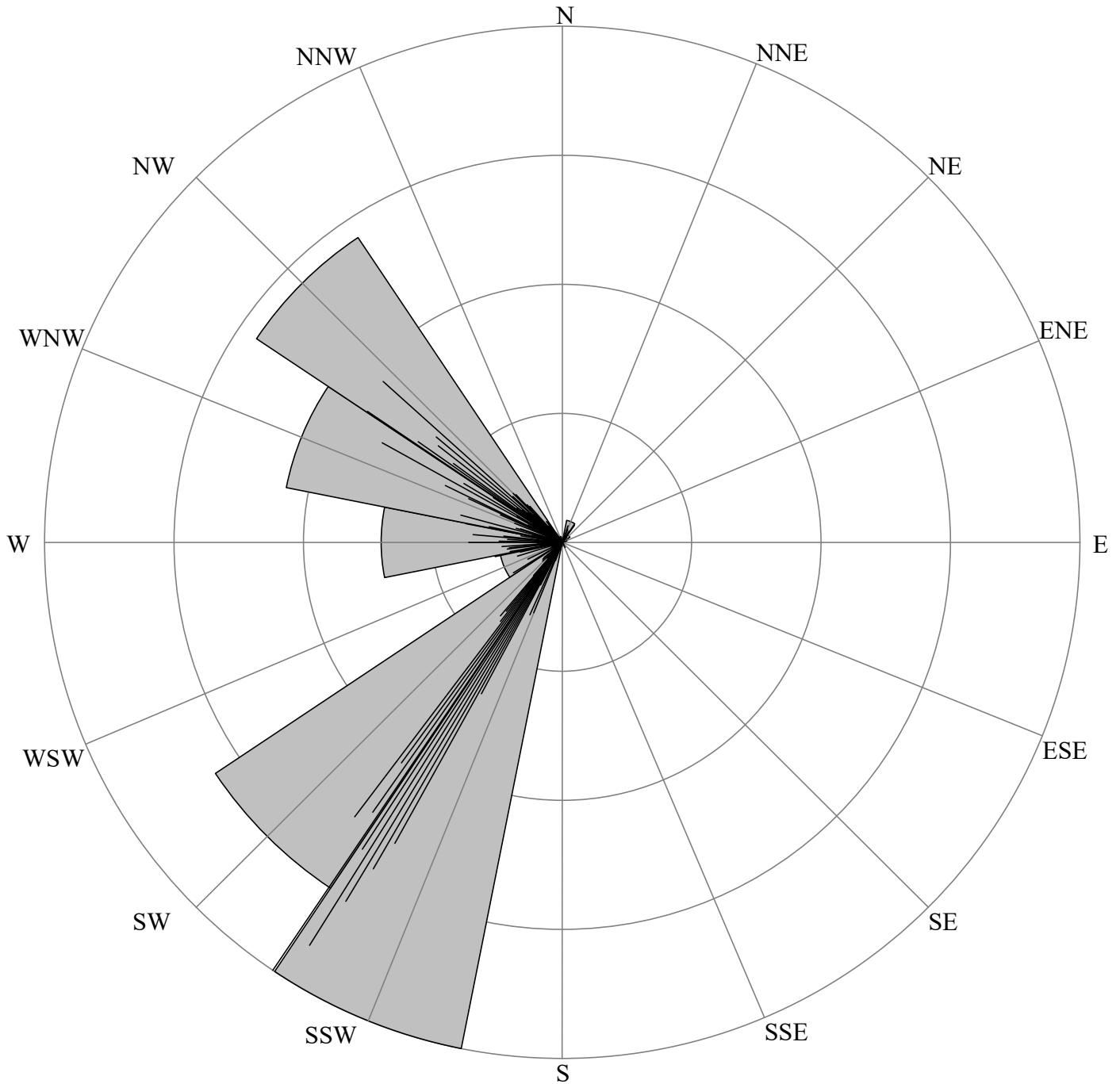
During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

# HOUR-BY-HOUR DATA

## October 2018: Westford



Wind Rose: October 2018  
Westford



Maximum direction of wind: 72.8 miles from 214°  
Maximum sector of wind: 340.7 miles from SSW  
1232.8 total miles of wind